

(Adopted January 6, 1978)(Amended August 3, 1979)(Amended July 11, 1980)  
(Amended August 3, 1990)(Amended December 7, 1990)  
(Amended November 17, 2000)

**RULE 1102. DRY CLEANERS USING SOLVENT OTHER THAN PERCHLOROETHYLENE**

(a) Applicability

This rule applies to all persons owning or operating a dry cleaning facility using solvent other than perchloroethylene.

(b) Definitions

For the purposes of this rule, the following definitions shall apply:

- (1) CARTRIDGE FILTER means a replaceable perforated canister that contains paper, activated carbon, or a combination of paper and activated carbon and that is used in a pressurized system in conjunction with piping and ductwork, to trap and remove contaminants such as solid particles and fugitive dyes from soil-laden solvent. A cartridge filter contains no diatomaceous earth or activated clay. Cartridge filters include, but are not limited to: standard filters, split filters, "jumbo" filters, and all carbon polishing filters.
- (2) CLOSED-LOOP MACHINE means dry cleaning equipment in which washing, extraction, and drying are performed in the same single unit and which re-circulates and recovers the solvent-laden vapor.
- (3) CONDENSER means a closed-loop vapor recovery system into which solvent vapors are introduced and trapped by using a chilling system, with or without refrigeration, to cool the outlet temperature.
- (4) COOL DOWN means the portion of the drying cycle that begins when the heating mechanism deactivates and a condenser, chilling coils or some other cooling device activates to reduce the temperature of the air re-circulating through the drum to reduce the concentration of solvent in the drum.
- (5) DIP TANK means a vessel or container that is separate from dry cleaning equipment, in which materials are immersed in solution that contains solvent for purposes other than dry cleaning.
- (6) DISTILLATION UNIT OR STILL means a device used to volatilize, separate and recover solvent from contaminated solvent.
- (7) DISTRICT is as defined in Rule 102.

- (8) DRUM means the rotating cylinder or wheel of the dry cleaning machine that holds the materials being cleaned, extracted or dried.
- (9) DRYING CABINET means a separate housing unit from the washer or extractor, to which wet, solvent-laden materials, that would otherwise be damaged by the heat and tumbling action of the drying cycle are transferred for drying.
- (10) DRYING CYCLE means the process used to actively remove the solvent remaining in the materials after washing and extraction. The drying cycle begins when heating coils are activated and ends when the machine ceases rotation of the drum. For closed-loop machines, the heated portion of the drying cycle is followed by cool down.
- (11) EXEMPT COMPOUNDS are defined in Rule 102.
- (12) GALLONS OF SOLVENT USED means the volume of solvent, in gallons, introduced into the dry cleaning equipment, and not recovered at the facility for re-use on-site in the dry cleaning equipment, over a specified time period.
- (13) GROUP II EXEMPT COMPOUNDS are defined in Rule 102.
- (14) LIQUID LEAK means an emission of solvent from openings in the dry cleaning equipment as a visible mist or at the rate of more than one (1) drop every three (3) minutes, as determined by visual inspection.
- (15) MATERIALS mean wearing apparel, draperies, linens, fabrics, textiles, rugs, leather, and all other goods that are being dry cleaned.
- (16) NON-HALOGENATED HYDROCARBON DETECTOR means a portable device capable of detecting vapor concentrations of solvent of 250 ppm by volume or less and indicating an increasing concentration by emitting an audible signal or visual indicator that varies as the concentration changes.
- (17) PORTABLE HYDROCARBON ANALYZER means a portable device which uses the flame ionization detection or thermal conductivity methods and satisfies EPA Method 21, 40 CFR Part 60, to analyze hydrocarbon vapor concentrations. The instrument shall be equated to calibrating on methane and sampling at one liter per minute.
- (18) PRE-WASH WEIGHT OF MATERIALS CLEANED PER LOAD means the total dry weight, in pounds, of the materials in each load dry cleaned at the facility, as determined by weighing each load on a scale prior to dry cleaning.

- (19) SETTLING TANK means a container which gravimetrically separates oils, grease, dirt and any other contaminants from solvent.
- (20) SOLVENT, for the purpose of this rule only, means a substance, including any detergents and additives, containing volatile organic compounds (VOC) or Group II exempt compound other than perchloroethylene that is used to dry clean materials and that exists as a liquid under standard conditions.
- (21) SOLVENT DRY CLEANING EQUIPMENT OR DRY CLEANING EQUIPMENT means any machine, device, or apparatus used to dry clean materials with solvent or to remove residual solvents from previously cleaned materials. Dry cleaning equipment may include, but is not limited to, a transfer machine, a closed-loop machine, a solvent recovery dryer, washer tumblers, extractors, dryers, reclaimers, condensers, chillers, heating coils, chilling coils, filters, purification systems, settling tanks, separators, stills, waste disposal systems, holding tanks, pumps, flanges, valves and associated piping.
- (22) SOLVENT DRY CLEANING FACILITY OR DRY CLEANING FACILITY is any facility engaged in the dry cleaning of materials using solvent.
- (23) SOLVENT DRY CLEANING OR DRY CLEANING, for the purpose of this rule only, means the process used to remove soil, greases, paints, odors, and other unwanted substances from materials with a solvent.
- (24) SOLVENT DRY CLEANING SYSTEM OR DRY CLEANING SYSTEM includes, but is not limited to, all of the following equipment, devices, or apparatus associated with the solvent dry cleaning process: dry cleaning equipment; filter or purification systems; waste holding, treatment, or disposal systems; solvent supply systems and storage tanks; pumps; gaskets; piping, ducting, fittings, valves, or flanges that convey solvent-contaminated air; and pollution control systems.
- (25) SOLVENT RECOVERY DRYER, DRYER, RECLAIMER, OR RECLAIMER DRYER is a class of dry cleaning dryers that employs a condenser or other cooling device to liquefy and recover solvent vapors evaporated in a closed-loop, re-circulating stream of air.
- (26) SPIN-DISC FILTER means a filter that traps and removes contaminants such as solid particles and fugitive dyes from soil-laden solvent and that can be cleaned, regenerated, and reused in closed-loop machines.

- (27) TRANSFER CART is a cart or container used for the transfer of wet solvent-laden materials from the washer to the dryer or to the drying cabinet that has a lid and walls which are impervious to the solvent.
- (28) TRANSFER MACHINE means a combination of solvent dry cleaning equipment in which washing and extraction are performed in one unit and drying is performed in a separate unit.
- (29) VAPOR LEAK means an emission of solvent vapor from openings in the dry cleaning equipment which causes bubbling from the application of a soap solution, causes a portable analyzer to exceed 250 ppm as methane, as determined by EPA Method 21, or causes a non-halogenated hydrocarbon detector to emit an audible signal or visual signal.
- (30) VOLATILE ORGANIC COMPOUND (VOC) is as defined in Rule 102.
- (31) WASTE WATER EVAPORATOR means a device that vaporizes solvent contaminated waste water through the addition of thermal or chemical energy, or through physical action.
- (32) WATER-REPELLING OPERATIONS means the treatment of materials with a solution that contain solvent to create a coating that repels water.

(c) Compliance Schedule

The owner or operator shall comply with the following:

- (1) Effective January 1, 2001, a person shall not operate a dip tank.
- (2) Effective January 1, 2001, a person shall not operate a drying cabinet.
- (3) Effective July 1, 2001, a person shall not open a closed-loop machine prior to completion of the drying cycle.
- (4) Effective January 1, 2003, a person shall not operate a transfer machine unless the requirements in either subparagraph (c)(4)(A) or subparagraph (c)(4)(B) are met:
  - (A) The owner or operator:
    - (i) submits to the Executive Officer a complete application by January 1, 2001 to obtain a permit condition that limits the quantity of solvent used to no more than 15 gallons per month;
    - (ii) demonstrates that the transfer machine has been operating in compliance for at least two years prior to November 17, 2000;
  - and,

- (iii) actually operates the transfer machine such that the solvent usage is no more than fifteen (15) gallons per month on and after January 1, 2001.
    - (B) The transfer machine is cleaning reusable soiled textile materials meeting the requirements of Health and Safety Code §25144.6(b) and the facility meets the requirements of Health and Safety Code §25144.6 (c).
  - (5) Effective January 1, 2005, a person shall not operate any transfer machine.
- (d) Equipment Specifications and Operating Requirements
- The owner or operator shall operate and maintain the solvent dry cleaning system in accordance with the requirements of this subdivision, the conditions specified in the facility's permit, and in accordance with the manufacturer's recommendations. A person shall not operate a solvent dry cleaning facility except in accordance with the compliance dates established in subdivision (c) of this rule and in accordance with the following:
- (1) General Specifications
    - (A) All washer lint traps, button traps, access doors, and other parts of the equipment where solvent may be exposed to the atmosphere shall be kept closed at all times except when required for proper operation or maintenance.
    - (B) Button and lint traps shall be cleaned each working day.
    - (C) The still residue, used filtering material, lint, used solvent and all other wastes containing solvent shall be stored in sealed containers until properly transported for disposal.
    - (D) For any dry cleaning system that is equipped with cartridge filters containing paper or carbon or a combination thereof, the cartridge filters shall be fully drained in a sealed filter housing for at least 24 hours before removal.
    - (E) All solvents shall be stored in closed containers.
    - (F) All parts of the dry cleaning system where solvent may be exposed to the atmosphere or workroom shall be kept closed at all times except when access is required for proper operation and maintenance.
    - (G) Waste water evaporators shall be operated to ensure that no liquid solvent or visible emulsion is allowed to vaporize to the atmosphere.

- (2) Additional Specifications for Closed-Loop Machines
  - (A) A closed-loop machine shall not exhaust to the atmosphere or workroom during operation except when the vacuum pump exhausts to maintain a continuous vacuum.
  - (B) For any closed-loop machine that is not equipped with a locking mechanism, the operator shall not open the door of a closed-loop machine prior to completion of the drying cycle.
  - (C) For any closed-loop machine that is equipped with a locking mechanism, the operator shall not inactivate the locking mechanism and open the door of a closed-loop machine prior to completion of the drying cycle.
- (3) Additional Specifications for Transfer Machines
  - (A) Materials which have been dry cleaned shall be transferred to the dryer by hand or in an enclosed transfer cart within five minutes after they are removed from the washer.
  - (B) The washer doors shall not be opened to transfer materials which have been dry cleaned unless there are an adequate number of dryers ready to take up the washed load.
  - (C) The solvent recovery dryer shall remain closed until there is no visible flow in the sight glass of the condenser for at least one minute.
  - (D) A solvent recovery dryer or an equivalent control device that reduces VOC emissions from drying tumblers by at least 90 percent by weight shall be installed and operated.
  - (E) The overall gallons of solvent used shall be less than 4.5 pounds per 100 pounds of materials dry cleaned.
- (e) Leak Check and Repair Requirements
  - (1) No less frequently than monthly, the owner or operator shall inspect the dry cleaning system for liquid and vapor leaks, including, but not limited to, the following:
    - (A) hose connections, unions, couplings, valves, and flanges;
    - (B) machine door gasket and seating of the machine cylinder;
    - (C) filter head gasket and seating;
    - (D) pumps;
    - (E) base tanks and storage containers;
    - (F) water separators;

- (G) filter sludge recovery;
  - (H) seals and gaskets of distillation unit(s);
  - (I) diverter valves;
  - (J) saturated lint from lint trap basket;
  - (K) button trap lid;
  - (L) cartridge or other types of filters;
  - (M) seals, gaskets and the diverter valve of the refrigerated condenser;
  - (N) exhaust stream ducts;
  - (O) lint trap ducts; and,
  - (P) gaskets and ducts of the carbon adsorber.
- (2) To inspect for a vapor leak, the operator shall use at least one of the following techniques:
- (A) soap bubble technique in accordance with the procedures in EPA Method 21, Section 4.3.3 – Alternative Screening Procedure; or
  - (B) a non-halogenated hydrocarbon detector; or
  - (C) a portable hydrocarbon analyzer or an alternative method approved by the District.
- (3) To inspect for a liquid leak, the operator shall visually inspect the equipment for liquid leaking in a visible mist or at the rate of more than one drop every three minutes.
- (4) Any liquid leak or vapor leak that has been detected by the operator shall be repaired within three (3) working days of detection. If repair parts are not available at the facility, the parts shall be ordered within two working days of detecting such a leak and the operator shall provide written notification to the Executive Officer that explains the reason(s) for delaying the leak repair. Such repair parts shall be installed within five working days after receipt. A facility with a leak that has not been repaired by the end of the seventh (7<sup>th</sup>) working day after detection shall not operate the dry cleaning equipment, until the leak is repaired.
- (f) Recordkeeping and Reporting Requirements
- (1) For each dry cleaning machine operated during a specified reporting period, the owner or operator shall maintain records containing:
- (A) a log showing the date and the pre-wash weight, in pounds, of materials cleaned per load;
  - (B) purchase and delivery receipts for the solvent;

- (C) for those facilities with solvent tanks that are not directly filled by the supplier upon delivery, a log showing the date(s) and amount, in gallons, of solvent added to the solvent tank of each dry cleaning machine;
- (D) the inventory of solvent, in gallons, at the start and end of the reporting period;
- (E) the amount, in gallons, of solvent used;
- (F) a log showing the dates of leak inspections;
- (G) for any liquid leak or vapor leak that is detected, a log showing the dates of detection and repair, the location of the leak, and the action taken to repair the leak; and,
- (H) the calculated facility mileage, determined from all solvent additions in the reporting period, as follows:

Total Weight, in pounds, of Materials Cleaned Per Load

Total Quantity, in gallons, of Solvent Used

- (2) All records shall be maintained pursuant to Rule 109.

(g) Test Methods

EPA Test Method 25 or SCAQMD Test Method 25.1 (March 1989), shall be used to determine compliance with this rule. Emissions determined to exceed limits established by this rule through the use of either of the above referenced test methods shall constitute a violation of this rule.

(h) Exemptions

- (1) Dry cleaning equipment which exclusively uses perchloroethylene as the cleaning solvent is exempt from this rule.
- (2) Dry cleaning equipment which exclusively uses a Group II exempt compound other than perchloroethylene as the cleaning solvent is exempt from subdivisions (c), (d), (e), and (g) and subparagraphs (f)(1)(F) and (f)(1)(G) of this rule provided that the detergents and additives used with these substances contain less than 50 grams per liter VOC.
- (3) Professional laundering equipment that uses liquid carbon dioxide as the cleaning solvent, provided that the detergents and additives used with these



substances contain less than 50 grams per liter VOC, is exempt from this rule.

- (4) Professional wet cleaning equipment that uses water as the cleaning solvent, provided that the detergents and additives used with these substances contain less than 50 grams per liter VOC, is exempt from this rule.